**Plasmid Mapping Problems**

Create a plasmid map for each of the following. For each restriction digest, you have been given the fragment lengths, but not the number of fragments.



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| **Restriction Enzyme** | **Number of Base Pairs** |
| SmaI | 1000 1300 |
| BamHI | 1200 2400 |
| SmaI and BamHI | 400 500 600 800 1300 |



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| **Restriction Enzyme** | **Number of Base Pairs** |
| EcoRI | 1500 2000 2500 |
| SalI | 1500 4500 |
| EcoRI and SalI | 500 1000 1500 2000 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| SmaI | 5000 7000 |
| BamHI | 6000 |
| SmaI and BamHI | 2000 3000 4000 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| EcoRI | 500 1100 |
| BamHI | 400 600 |
| EcoRI and BamHI | 200 300 600 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| EcoR1 | 200 600 1200 |
| HindIII | 100 800 1100 |
| EcoRI and HindIII | 100 200 400 700 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| BamHI | 1700 |
| EcoRI | 1700 |
| HindIII | 700 1000 |
| BamHI and EcoRI | 500 1200 |
| BamHI and HindIII | 100 600 1000 |
| EcoRI and HindIII | 400 600 700 |
| All | 100 400 600 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| BamHI | 4000 |
| EcoRI | 4000 8000 |
| HindIII | 5000 7000 |
| BamHI and EcoRI | 2000 4000 |
| BamHI and HindIII | 1000 2000 3000 4000 |
| EcoRI and HindIII | 1000 3000 4000 |
| All | 1000 2000 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| BamHI | 300 1700 |
| EcoRI | 300 1700 |
| HindIII | 800 1200 |
| BamHI and EcoRI | 100 200 1500 |
| BamHI and HindIII | 100 300 400 1200 |
| EcoRI and HindIII | 200 300 1200 |
| All | 100 200 1200 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| BamHI | 600 800 1000 |
| EcoRI | 700 1700 |
| HindIII | 700 1700 |
| BamHI and EcoRI | 300 400 1000 |
| BamHI and HindIII | 200 500 600 |
| EcoRI and HindIII | 200 700 800 |
| All | 200 300 400 500 |

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| **Restriction Enzyme** | **Number of Base Pairs** |
| BamHI | 2000 |
| EcoRI | 1000 3000 |
| HindIII | 1500 2500 |
| BamHI and EcoRI | 400 600 1400 1600 |
| BamHI and HindIII | 800 700 1200 1300 |
| EcoRI and HindIII | 600 900 1000 1500 |
| All | 400 600 700 800 900 |